

**Electrical Engineering & Computer Science
University of Kansas**

**EECS 845
Implementation of High Performance Networks
Tuesday and Thursday, 11 AM to 12:20 PM
2029 Learned Hall**

Dr. Joseph B. Evans
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204 Nichols Hall, 864-4830

Office Hours: Tuesday and Thursday, 1:30 - 2:30 PM, Nichols Hall
Otherwise by appointment

Topics

- Introduction to High Performance Networking
- Networking and Network Architectures
- Functions and Implementations
- Packet and Cell Switch Architectures
- Routing
- Internetworking
- IP over ATM
- Synchronization and Framing
- Error Detection/Correction Coding
- Congestion Control and Bandwidth Management
- Host Performance Issues
- Encryption/Decryption

Texts/References:

- Notes
- Computer Networks – A Systems Approach, L. Peterson and B. Davie, Morgan Kaufmann, 1996 (required)
- Internetworking with TCP/IP – Volume I, D. Comer, Prentice Hall, 1995 (recommended)
- Gigabit Networking, Craig Partridge, Addison-Wesley, 1994 (recommended)

Anticipated Schedule

Date	Topic
January 13	Course Organization
January 15	Overview of Networking
January 20	Overview of Networking
January 22	Overview of Networking
January 27	Direct Link Networks
January 29	Direct Link Networks
February 3	Packet and Cell Switching
February 5	Packet and Cell Switching
February 10	Synchronization and Framing
February 12	Synchronization and Framing
February 17	Error Detection/Correction Coding
February 19	Error Detection/Correction Coding
February 24	Internetworking
February 26	Internetworking
March 3	Internetworking
March 5	Exam
March 10	IP and ATM
March 12	IP and ATM
March 17	IP and ATM
March 19	End-to-End Protocols
March 24	Spring Break
March 26	Spring Break
March 31	End-to-End Protocols
April 2	Encryption/Decryption
April 7	Encryption/Decryption
April 9	Congestion Control
April 14	Congestion Control
April 16	Host Performance Issues
April 21	Host Performance Issues
April 23	QoS Architectures
April 28	Paper Presentations
April 30	Paper Presentations
May 11	Final Exam, 11:30 AM – 2:30 PM

Note that this schedule may be modified in order to adapt to currently unforeseen circumstances.

Grading Policy

The class will be graded competitively according to the percentages listed below. Each assignment within a category will be weighted equally. The course grade thresholds (that is, the numerical grade required to get a particular letter grade) will be set by the instructor to reflect the relative performance of the students. Class attendance is expected unless otherwise indicated.

Exam	20%
Final	20%
Paper Presentations	20%
Project	30%
Homework, Miscellaneous	10%

Note: failure to complete the "Project" portion of the course will result in a grade of F for the course.

3% per day will be subtracted from assignments turned in late, except under extraordinary circumstances and with adequate prior notification of the instructor.

The student must notify the instructor within 48 hours of a missed exam and present adequate justification. If illness is the justification, a doctor's note must be provided to the instructor.

An appeal on grades for individual assignments must be within 14 days of the date the assignment is returned.

Further details of the project grading procedure may be announced in class or via e-mail as required.